CLAIMS

1. A surface acoustic wave filter comprising:

a mount board having a land;

a device chip in which a wiring pattern including an IDT and a pad electrically connected to the IDT is formed on one of a pair of parallel and opposing principal surfaces of a piezoelectric substrate, the pad being disposed so as to oppose the land of the mount board, the pad and the land being electrically connected through a bump; and

a resin film covering the other principal surface of the piezoelectric substrate and sealing the device chip,

wherein the one of the principal surfaces of the piezoelectric substrate is relatively large and the other principal surface of the piezoelectric substrate is relatively small.

2. The surface acoustic wave filter according to Claim 1, wherein peripheral surfaces of the piezoelectric substrate extending between the pair of principal surfaces each have a parallel planar portion which is substantially parallel to the pair of principal surfaces of the piezoelectric substrate and a vertical planar portion which is substantially perpendicular to the pair of principal surfaces of the piezoelectric substrate, so that the peripheral surfaces of the piezoelectric substrate each have a stepped portion including at least one step.

3. The surface acoustic wave filter according to Claim 1, wherein peripheral surfaces of the piezoelectric substrate extending between the pair of principal surfaces each have a tapering portion extending along an outer edge of the other principal surface of the piezoelectric substrate.

4. The surface acoustic wave filter according to Claim 1, wherein

peripheral surfaces of the piezoelectric substrate extending between the pair of principal surfaces each have a curved portion extending along an outer edge of the other principal surface of the piezoelectric substrate.

5. A method of producing surface acoustic wave filters comprising:

a first step of producing a plurality of device chips, each having a wiring pattern formed on one of a pair of opposing principal surfaces of a piezoelectric substrate, each wiring pattern including an IDT and a pad electrically connected to the IDT;

a second step of mounting the plurality of device chips that are spaced apart from each other to a board aggregate by disposing the one of the principal surfaces of each device chip so as to oppose the board aggregate and electrically connecting the one of the principal surfaces of each device chip to the board aggregate through a bump;

a third step of sealing the device chips with a resin film by covering the device chips mounted to the board aggregate with the resin film and pressing the resin film that is being heated; and

a fourth step of severing the surface acoustic wave filters from each other by cutting portions of the resin film and the board aggregate between the device chips adjacent to each other,

wherein the first step includes forming the one of the principal surfaces of each piezoelectric substrate relatively large and the other principal surface of each piezoelectric substrate relatively small by removing a portion of each piezoelectric substrate near an outer edge of the other principal surface.